

## **RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL PROLIFERATIVE AGENT.**

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ATGCTGCTCCACCACTGCCAAATACAAATACTGCCAAC -1  
 ATG AAG TGG GTG GAA TCA ATT TTT TTA ATT TTC CTA CTA AAT TTT ACT GAA TCC AGA (101)

-19  
 met lys trp val glu ser ile phe leu ile phe leu leu asn phe thr glu ser arg  
 1 10 20 30  
 thr leu his arg asn glu tyr gly ile ala ser ile leu asp ser tyr gln cys thr ala glu ile ser leu ala asp leu ala thr ile  
 ACA CTG CAT AGA ATA GAA TAT GGA ATA GCT TCC ATA TGC GAT TCT TAC CAA TGT ACT GCA GAG ATA ACT TTA GCT GAC CTC GCT ACC ATA (191)

40 50 60  
 phe phe ala gln phe val gln glu ala thr tyr lys glu val ser lys met val lys asp ala leu thr ala ile glu lys pro thr gly  
 TTT TTT GCC CAG TTT GTR CAA GAA GCC ACT TAC AGC GAA GTA AGC AAA ATG GTG AAA GAT GCA TGG ACT GCA ATT GAG AAA CCC ACT GGA (281)

70 80 90  
 asp glu gln ser ser gly cys leu glu asn gln leu pro ala phe leu glu glu leu cys his glu lys glu ile leu glu lys tyr gly  
 GAA GAG TCT TCA GGG TGT TTA GAA AAC CAG CTA CCT GCC TTT CTC GAA GAA CTT TGC CAT GAG AAA GAA ATT TTG GAG AAG TAC GGA (371)

100 110 120  
 his ser asp cys cys ser gln ser glu glu gly arg his asn cys phe leu ala his lys lys pro thr pro ala ser ile pro leu phe  
 CAT TCA GAC TGC TGC AGC CAA AGT GAA GAG GGA AGA CAT AAC TGT TTT CTT GCA CAC AAA AAG CCC ACT CCA GCA TCG ATC CCA CTT TTC (461)

130 140 150  
 gln val pro glu pro val thr ser cys glu ala tyr glu glu asp arg arg glu thr phe met asn lys phe ile tyr glu ile ala arg arg  
 CAA GTP CCA GAA CCT GTC ACA AGC TGT GAA GCA TAT GAA GAA GAC AGG GAG ACA TTC ATG AAC AAA TTC ATT TAT GAC ATA GCA AGA AGG (551)

160 170 180  
 his pro phe leu tyr ala pro thr ile leu leu trp ala ala arg tyr asp lys ile ile pro ser cys cys lys ala glu asn ala val  
 CAT CCC TTC CTG TAT GCA GCA CCP ACA AGC ATT CTT CTT TGG GCT GCT CGC TAT GAC AAA ATA ATT CCA TCT TGC TGC AAA GCT GAA AAT GCA GTT (641)

181 190 200 210  
 glu cys phe gln thr lys ala ala ala thr val thr lys glu leu arg glu ser ser leu leu asn gln his ala cys ala val met lys asn  
 GAA TGC TTC CAA ACA AAG GCA GCA ACA GTP ACA AAA GAA TTA AGA GAA AGC AGC TTG TTA ATT CAA CAT GCA TCT GCA GTA ATG AAA AAT (731)



Fig. 1A

RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL  
PROLIFERATIVE AGENT.

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211 phe gly thr arg thr phe gln ala ile thr val thr lys leu ser gln lys phe thr lys val asn phe thr glu ile gln lys leu val  
TTT GGG ACC CGA ACT TTC CAA GCC ATA ACT GTT ACT AAA CTG AGT CAG AAC TTT ACC AAA GTT ATT TTT ACT GAA ATC CAG AAA CTA GTC (821)  
241 leu asp val ala his val his glu his cys cys arg gly asp val leu asp cys leu gln asp gly glu lys ile met ser tyr ile cys  
CTG GAT GTG GCC CAT GTA CAT GAG CAC TGT TGC AGA GGA GAT GTG CTG GAT TGT CTG CAG GAT GGG GAA AAA ATC ATG TCC TAC ATA TGT (911)  
271 ser gln gln asp thr leu ser asn lys ile thr glu cys cys lys leu thr thr leu glu arg gly gln cys ile ile his ala glu asn  
TCT CAA CAA GAC ACT CTG TCA AAC AAA ATA ACA GAA TGC TGC AAA CTG ACC ACC CTG GAA CGT GGT CAA TGT ATA ATT CAT GCA GAA ATT(1001)  
301 asp glu lys pro glu gly leu ser pro asn leu asn arg phe leu gly asp arg asp phe asn gln phe ser ser gly glu lys asn ile  
GAT GAA AAA CCT GAA GGT CTA TCT CCA ATT CTA AAC AGG TTT TTA GGA GAT AGA GAT TTT AAC CAA TTT TCT TCA GGG GAA AAA ATT ATC(1091)  
331 phe leu ala ser phe val his glu tyr ser arg arg his pro gln leu ala val ser val ile leu arg val ala lys gly tyr gln glu  
340 350 360  
TTC TTG GCA AGT TTT GTT CAT GAA ATT TCA AGA AGA CAT CCT CAG CTT GCT GTC TCA GAA ATT CTA AGA GAT GCT AAA GGA TAC CAG GAG(1181)  
361 leu ile glu lys cys phe gln thr glu asn pro leu glu cys gln asp lys gly glu glu glu leu gln lys tyr ile gln glu ser gln  
370 380 390  
TTA TTG GAG AAC TGT TTC CAG ACT GAA AAC CCT CTT GAA TGC CAA GAT AAA GGA GAA GAA TTA CAG AAA TAC ATC CAG GAG AGC CAA(1271)  
391 ala leu ala lys arg ser cys gly leu phe gln lys leu gly glu tyr tyr leu gln asn ala phe leu val ala tyr thr lys lys ala  
400 410 420  
GCA TTG GCA AAG CGA AGC TGC GGC CTC TTC CAG AAA CTA GGA GAA ATT TAC TTA CAA ATT GCG TTT CTC GTC GCT TAC ACA AAC AAA GCC(1361)  
421 pro gln leu thr ser ser glu leu met ala ile thr arg lys met ala ala thr cys cys gln leu ser glu asp lys leu  
430 440 450  
CCC CAG CTG ACC TCG TCG GAG CTG ATG GCC ATC ACC AGA AAA ATG GCA GCC ACA GCA GCC ACT TGT TGC CAA CTC AGT GAG GAC AAA CTA(1451)

Fig. 1B



## **RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL PROLIFERATIVE AGENT.**

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451 leu ala cys gly glu gly ala ala asp ile ile ile gly his leu cys ile arg his glu met thr pro val asn pro gly val gly gln  
 452 TTG GCC TGT GGC GAG GGA GCG GCT GAC ATT ATT ATC GGA CAC TTA TGT ATC AGA CAT GAA ATG ACT CCA GTA AAC CCT GGT GTC GGC CAG(1541)  
 481 cys cys thr ser ser tyr ala asn arg arg pro cys phe ser ser leu val val asp glu thr tyr val pro pro ala phe ser asp asp  
 482 TCC TCC ACT TCT TCA TAT GCC AAC AGC AGG CCA TGC TTC AGC AGC TTG GNG GTG GAT GAA ACA TAT GTC CCT CCT GCA TTC TCT GAT GAC(1631)  
 511 lys phe ile phe his lys asp leu cys gln ala gln gly val ala leu gln thr met lys gln glu phe leu ile asn leu val lys gln  
 512 AAC TTC ATT TTC CAT AAC GAT CTG TGC TCC CAA GCT CAG GGT GTC GCG CTG CAA ACG ATG AAG CAA GAG TTT CTC ATT AAC CTT GTC AAG CAA(1721)  
 541 lys pro gln ile thr glu glu gln leu glu ala val ile ala asp phe ser gly leu leu glu lys cys gln gly gln glu gln glu  
 542 AAC CCA CAA ATA ACA GAG GAA CAA CTT GAG GCT GTC ATT GCA GAT TTC TCA GGC CTG TTG GAC AAA TGC TGC CAA GGC CAG GAA CAG GAA(1811)  
 571 val cys phe ala glu glu gly gln lys leu ile ser lys thr arg ala ala leu gly val ter  
 572 GTC TGC TTT GCT GAA GAG GGA CAA AAA CGT ATT TCA AAA ACT CGT GCT GCT TTG GGA GTT TAA ATTTCTCAGGGAGAGAGAACAAACGAGCT(1908)  
 580  
 590

Fig. 1C

RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL  
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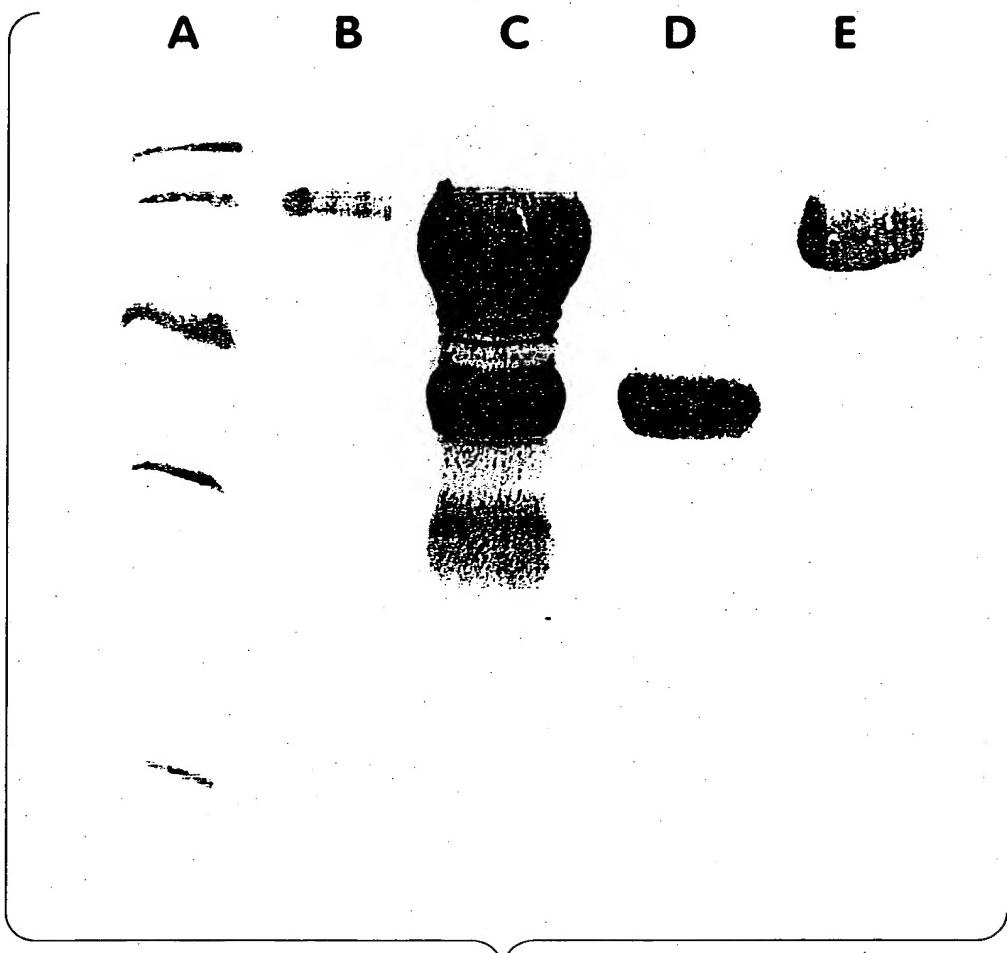


Fig. 2

RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL  
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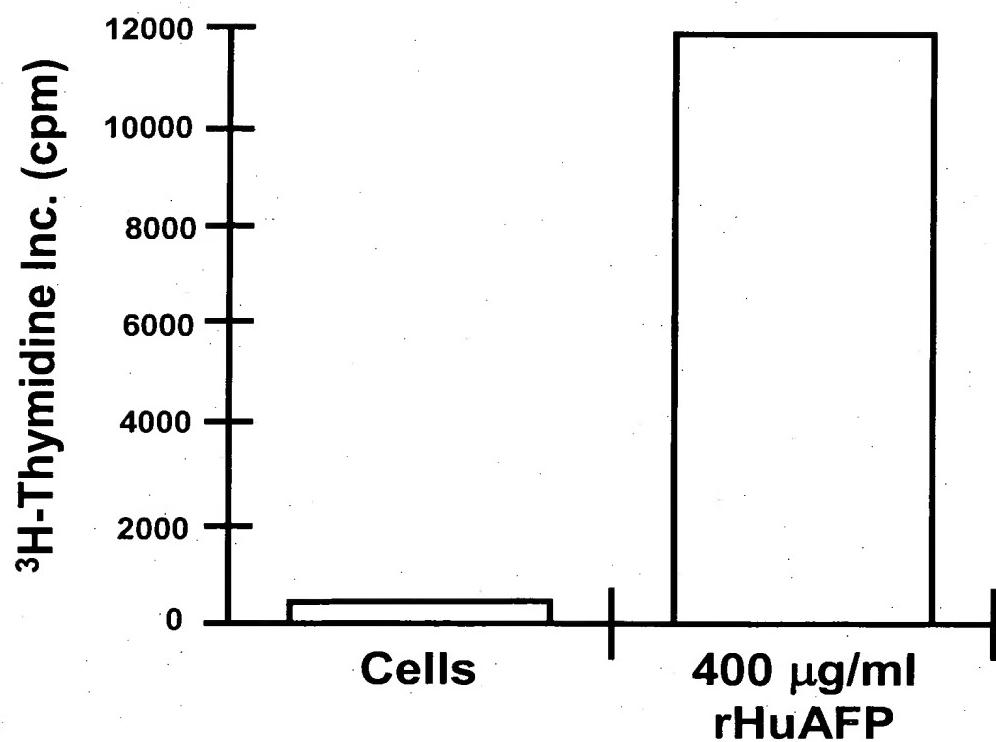


Fig. 3